

**Product Texts**

NORYL™ SE1GFN3 resin is a 30% glass reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of V1 at 1.5mm along with UL746C Outdoor Suitability rating of F1 and RTI of 110C. NORYL SE1GFN3 exhibits high heat resistance, good dielectric strength, dimensional stability, hydrolytic stability, and very low moisture absorption. This material is an excellent candidate for a variety of applications such as solar frames, unattended power supply (UPS) inverter/charger, indoor and outdoor electrical enclosures / housings / connectors, and wall plates / sockets / switches.

UL Yellow Card Link [E45329-236778](https://www.ul.com/yellow-card/E45329-236778)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	9	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	10	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	8000	MPa	ISO 527
Stress at break	105	MPa	ISO 527
Strain at break	2	%	ISO 527
Flexural modulus	6000	MPa	ISO 178
Charpy impact strength, +23°C	30	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	30	kJ/m <sup>2</sup>	ISO 179/1eU
Izod impact strength, +23°C, 4mm	25	kJ/m <sup>2</sup>	ISO 180/1U
Izod impact strength, -30°C, 4mm	25	kJ/m <sup>2</sup>	ISO 180/1U
Ball indentation hardness	130	MPa	ISO 2039-1

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Vicat softening temperature, A	155	°C	ISO 306
Vicat softening temperature, B	145	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	150	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	V-1	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	6.0	mm	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	3.0	mm	-
Thermal Conductivity	0.28	W/(m K)	DIN 52616
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3.2	mm	-

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Relative permittivity, 1MHz	3	-	IEC 62631-2-1
Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1
Volume resistivity	1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	30	kV/mm	IEC 60243-1
Comparative tracking index	300	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	0.23	%	Sim. to ISO 62
Humidity absorption	0.07	%	Sim. to ISO 62
Density	1290	kg/m <sup>3</sup>	ISO 1183

**NORYL™ Resin SE1GFN3 - Europe**

(PPE+PS)-GF30

Saudi Basic Industries Corporation (SABIC)

<b>Processing Recommendation Injection Molding</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Pre-drying - Temperature	<b>110 - 120</b>	°C	-
Pre-drying - Time	<b>2 - 3</b>	h	-
Melt temperature	<b>300 - 320</b>	°C	-
Mold temperature	<b>100 - 130</b>	°C	-
Feed temperature	<b>80 - 100</b>	°C	-
Zone 1	<b>260 - 280</b>	°C	-
Zone 2	<b>280 - 300</b>	°C	-
Zone 3	<b>300 - 320</b>	°C	-

**Characteristics****Processing**

Injection Molding

**Chemical Resistance**

Hydrolytically Stable

**Additives**

Flame retarding agent

**Regional Availability**

Europe

**Special Characteristics**

Flame retardant